**Chapter 3 Mix Mole Problems**

**Solve the following problems**

**Answer Keys**

1. How many grams are there in 1.5×10^25 molecules of CO2 ?

**Answer: 1.1×10^3 g**

1. What Volume would the CO2 in Problem 1 occupy at STP (Standard Temperature and Pressure)? Use the formula: PV=nRT (P: pressure in atm; V: volume in L; n: #mole; R: 0.0821 L-atm/mol-K; T: temperature in Kelvin)

**Answer: 3.4 × 10^26 L**

1. A sample of NH3 gas occupies 75.0 liters at STP. How many molecules is this?

**Answer: 3.4 mol**

1. What is the mass of the sample of NH3 in Problem 3?

**Answer: 57 g**

1. How many atoms are there in 1.3×10^22 molecules of NO2?

**Answer: 3.9 x 10^22 atoms**

1. What is the mass of 3.62×10^24 molecules of methanol (CH3OH)?

**Answer: 192 g**